Information Bulletin

Near Miss Due to Dropped Piece of Piping

September 10, 2007 **2007-RL-HNF-0033** **Tracking No: 668**

Summary: While working above an occupied office area, a construction worker dropped a pipe through the office ceiling. The pipe landed approximately eight inches from a worker seated in the office. When planning work activities, the hazard analysis should be in-depth and include all aspects of the task from beginning to end. When working above occupied areas the most effective hazard control is to move personnel out of the area until the work is completed. Subtle hazards can sometimes be identified when a job is broken down into smaller steps for hazards analysis.

Discussion of Activities: Prior to installing sprinkler piping in the 271T Building, a construction worker was performing a measurement between a main sprinkler line and the ninety degree join for the sprinkler drop. In order to align the components for an accurate measurement, the worker was using an approximately eighteen inch piece of piping inserted into a pre-drilled hole from the third floor mezzanine above a third floor office ceiling where the drop would be installed. The worker lost his grip on the pipe and it dropped from the mezzanine, through the hole, and to the floor of an occupied office below. The 2.5 pound piece of pipe fell to the floor approximately eight inches from a seated office worker.

Analysis: For installation of the sprinkler drops in the offices, a Job Safety Analysis (JSA) was used. The JSA is a less formal hazards assessment in comparison to the Automated Job Hazards Analysis (AJHA) tool. The AJHA provides a broader spectrum of hazards and mitigations than does the JSA. The completed JSA (for installation of the sprinkler drop) discussed having a second worker in the office and clearing the office of other personnel when installing the sprinkler piping. The same controls were not applied to all work (including measurement) performed above the occupied office. The process of measuring the sprinkler piping was a routine activity which always used a piece of pipe to obtain an accurate measurement. Personnel did not recognize the measuring process itself created a hazard to personnel due to the potential to drop any type of measuring device through the predrilled hole into the office below.

Recommended Actions: Subtle hazards can sometimes be identified when a job is broken down into smaller steps for hazards analysis. Measuring for sprinkler installation seems simple enough, but the conditions associated with that task can present additional hazards. Hazard analysis should consider that materials could not only be dropped from a height, they can be dropped through existing barriers.

For all construction work performed above occupied areas, the area immediately below the construction should be cleared of personnel. Hazard analysis should consider that materials could not only be dropped from a height, they can be dropped through existing barriers.

When a hazard analysis is performed of an activity, all aspects of the activity should be

analyzed for hazards - not just the end work.

Cost Savings/Avoidance: Not Evaluated

Work Function: Construction, Demolition, Decontamination and Decommissioning, Work Planning

Hazards: Personnel Injury

ISM Core Functions: Analyze Hazards and Risks, Develop/Implement Controls

Keywords: Dropping Material

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References: EM-RL—PHMC-TPLANT-2007-0003